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GIH 452

**Second Semester M.Sc. Degree Examination, September/October 2022
(CBCS)
GEOINFORMATICS
Digital Image Processing**

Time : 3 Hours

Max. Marks : 70

I. Define **any five** of the following.

(5×2=10)

- 1) Digital numbers
- 2) Temporal Resolution
- 3) Atmospheric absorption
- 4) NDWI
- 5) BIP image format
- 6) High-pass filtering
- 7) Signal to Noise ratio.

II. Write a short notes on **any five** of the following.

(5×4=20)

- 8) Radiometric errors.
- 9) Band rationing.
- 10) Characteristics of Raster image.
- 11) Spatial pattern recognitions.
- 12) Moisture Stress Index (MSI).
- 13) Fourier transformation in image analysis.
- 14) Euclidean distance method.

P.T.O.



III. Answer **any four** of the following.

(4×5=20)

- 15) Elaborate on Principle Component Analysis.
- 16) What is a noise ? How the noise is introduced in an image ?
- 17) Explain different types of image file formats.
- 18) Describe types of image enhancement techniques.
- 19) What is image acquisition ? Explain techniques of image acquisition.

IV. Essay type questions.

(2×10=20)

- 20) Explain in detail about the different types of image supervised classification.

OR

Discuss in detail about the Geometric errors and corrections to be carried out while preprocessing the raw digital image.

- 21) Give a detailed account of various vegetation indices used in multi-image manipulation.

OR

Explain in detail the classification accuracy assessment by developing an error matrix.
